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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/626,026	07/27/2000	Ashok Sengupta	54942US002	9991
32692 7590 06/05/2007 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			EXAMINER LEVY, NEIL S	
			ART UNIT 1615	PAPER NUMBER
			NOTIFICATION DATE 06/05/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 09/626,026	Applicant(s) SENGUPTA ET AL.	
	Examiner NEIL LEVY	Art Unit 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 45 and 49-57 is/are pending in the application.
- 4a) Of the above claim(s) 51, 53, 54 and 56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 45, 49, 50, 52 and 55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 45 and 49-57 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Newly submitted claims 51,53,54 & 56 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: curing & cured compositions are final products of intermediate/final product distinctness, since the intermediates can be used to make other than the claimed final products, such as teat dips.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 51,53,54 & 56 stand withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

Claim 52,55,57 stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for water soluble compositions, does not reasonably provide enablement for the claimed articles & methods. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims. On its face, a water soluble polyurethane composition would have too short a life to provide the claimed

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antimicrobial effects, when in the presence of water, such as rain on a roof shingle. The length of efficacious action would be fleeting, & suggests a missing element(s) in the claims to method & articles- the polymer must not be in a water soluble form as claimed, if it is at all useful as antimicrobial applied on articles.

Claim Rejections - 35 USC § 103

Claims 45, 49-50, 52, 55, 57 stand rejected under 35 U.S.C. 103(a) as being unpatentable over GOULD et al 4451635 in view of GREEN et al 3931319 and VANDERGAARD 4110286.

Response to Arguments

Applicant's arguments filed 2/28/07 have been fully considered but they are not persuasive. Applicant argues no antimicrobial effects are attributable to the article of claim 52 coated with the water-soluble polymer of claim 45. The article is not evident in the specification so far as examiner can determine. Paints of polyurethane would appear to constitute a claim 45 composition applied to a substrate, but examiner is not able to discern where the specification provides any useful articles of water soluble coatings, except as intermediates. Further, there is nothing in the specification showing preventing growth, cured or uncured.

As to the 103 rejection, it is well known that quaternary ammonium groups confer antimicrobial efficacy in whatever vehicle, water included, or substrate, they are applied in or to. Applicant argues GOULD AND GREEN are not antimicrobial. Absent some showing by applicant that the quats of GREEN and GOULD are not antimicrobials, examiner believes the instant claimed one antimicrobial quaternary ammonium group is in fact present in GREEN and GOULD. Attorney argues GOULD does not state the quaternary ammonium is antimicrobial, and that GOULD states quat group are present, at column 4, lines 37-42; and would meet this constraint in GOULD's aqueous solution of a polyurethane quaternary ammonium salt, applying as a coating.

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Attorney argues: GREEN appears devoid of teaching that end capping provides antimicrobial properties, and is not any better than non-capped moieties. And all GREEN's polymers tested for antimicrobial testing are capped with quat moieties, so there is no basis for motivation exists to cap GOULD's polymers, and if one did, one would not obtain an antimicrobial quat moiety. Attorney also states chemical reactions taught by GOULD would not produce the reaction taught by GREEN and VANDERGAER and are combinable.

Finally, attorney argues if one were to modify GOULD, one would not obtain the quat of claim 49 or 50.

Examiner finds the claimed compositions of a polyurethane, water soluble, of unspecified degree, are common in the polyurethane arts. The intermediate coating polymers may be water soluble, as are GOULD's, with properties adjustable as desired (column 2, lines 37-45) before curing. As attorney states, GOULD describes the polyurethanes as water soluble. GREEN is cited to show end capping provides microbiocidal polymers having quaternary ammonium moieties.

VANDEGAER in another reference depicting added quaternary moieties to polyurethane. IMIZATO, of record, also provided polyurethane quaternary moieties particularly those of claim 50. KLESSE, of record, also provided quaternary polyurethane treated polymers. These moieties are not unknown, and the degree of water solubility of a polymer can be provided as desired, according to these references, and GOULD. Applicant provided no basis for any unexpected or unobvious results associated with the compositions as claimed, over the prior art use of various quaternary moieties added to polyurethanes.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the


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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NEIL LEVY whose telephone number is 571-272-0619. The examiner can normally be reached on Tuesday-Friday, 7 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL WOODWARD can be reached on 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


NEIL LEVY
Primary Examiner
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